



# Federal Environmental Issues Driving the Electricity and Gas Industries

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September 9, 2014

- **MATS Rule (Utility MACT Rule)**
  - Final Rule 2011
  - Update for New plants 2013
  - EPA still reconsidering startup and shutdown issues.
- **CSAPR**
  - Rule upheld by Supreme Court in April 2014
  - EPA has asked Court of Appeals to lift stay
  - CAIR still in effect.
- **SO<sub>2</sub> NAAQS Implementation – Monitoring v. Modeling**
- **Potential New NO<sub>x</sub> NAAQS – How low can it go?**

- Public Nuisance Litigation
  - *GenOn* and *TVA* cases
  - Can plaintiffs bring nuisance claims related to alleged health impacts at concentrations below NAAQS?
- Section 316(b) Rule
  - Final rule published last month
  - Seven compliance options for impingement
  - Site-specific entrainment analysis
  - Industry largely satisfied; NGOs promise to sue
- Coal ash (For coal plants still in operation)
  - Is coal ash hazardous?
  - Rule to be promulgated December 2014

## And Yet, Is It Really All About Carbon?

- A Paraphrase of Remarks By Gina McCarthy in 2010 – The regulations under development by EPA that are likely to have the biggest impact on GHG emissions are not the Tailoring Rule and other programs directly focused on GHG; everything else is much more important.



# Yes, It Really Is All About Carbon

- Supreme Court Decision on EPA's PSD and Operating Permit Rule
- EPA's Proposed Emission Guidelines for Existing Sources
- A Note on GHG Nuisance Claims
  - Federal Nuisance Claims on Life Support?
  - Still Potential for State Nuisance Claims?



# Carbon Emissions: Overview of Obama Administration Initiatives and Resulting Court Challenges

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# Main Topics of Discussion

- *Utility Air Regulatory Group v. EPA* and Implications
- The EPA Clean Power Plan
- The EPA Modified and Reconstructed Source Proposal

## *Utility Air Regulatory Group v. EPA*

- In response to *Massachusetts v. EPA*, 549 U.S. 497 (2007), EPA promulgated GHG emission standards for new motor vehicles, and made stationary sources subject to the Prevention of Significant Deterioration (PSD) program and Title V on the basis of their potential to emit GHGs.
- EPA adopted the “Tailoring Rule,” which would subject sources to regulation for GHGs only if they emitted 100,000 tons per year or more, substantially higher than the statutory thresholds.
- Opinion available [here](#)



## Main Questions on Review

- Whether EPA permissibly determined that a source may be subject to PSD and Title V permitting requirements on the sole basis of the source's potential to emit GHGs.
- Whether EPA permissibly determined that a source already subject to the PSD program because of emission of conventional pollutants (“anyway sources”) may be required to limit its greenhouse gas emissions by employing the “best available control technology” (BACT) for GHGs.

## “Air Pollutant” vs. “Any Air Pollutant”

- The Clean Air Act does not compel permitting requirements solely for GHGs.
  - GHGs are part of the Act-wide definition of “air pollutant” under *Massachusetts v. EPA*, 549 U.S. 497 (2007).
  - The Act requires permits for major emitters of “any air pollutant.”
  - The Act-wide term “air pollutant” and the term “any air pollutant” in the permitting provisions do not mean the same thing, and EPA has routinely given “any air pollutant” a narrower, context-dependent meaning.
  - “The Act-wide definition to which the Court [in *Massachusetts*] gave a sweeping and capacious interpretation is not a command to regulate, but a description of the universe of substances EPA may consider regulating under the Act’s operative provisions.”

# The Tailoring Rule

- Permitting requirements solely for GHG emission are not within EPA's statutory authority
  - Under the numerical thresholds in the Act, hundreds of thousands of small sources would be subject to regulation as emitters of GHGs, but the Act was designed to regulate a smaller number of sources, subjecting them to complex and expensive requirements.
  - EPA could not ignore the numerical limits by use of the Tailoring Rule, which would allow EPA to decide thresholds for regulation on an ongoing basis. The low thresholds in the statute and the huge number of sources subject to regulation “should have alerted EPA that it had taken a wrong interpretive turn.”

## “Anyway” Sources

- Sources already subject to the PSD program because of emission of conventional pollutants may be required to employ BACT for GHGs
  - BACT is required “for each pollutant subject to regulation under this chapter,” which includes GHGs.
  - Applying BACT to GHGs “is not so disastrously unworkable, and need not result in such a dramatic expansion of agency authority” as would permitting requirements solely for GHGs. Rather, it would entail only “moderately increasing the demands EPA (or a state permitting authority) can make of entities already subject to its regulation.”

- Sources remaining subject to regulation account for about 83% of GHG emissions.
- The decision provides limited guidance on the judicial fate of EPA's other proposed GHG regulations.
  - Footnote 5 of the opinion suggests that the decision does not apply to New Source Performance Standards (NSPS).
  - Sections of the opinion seem to show reluctance to authorize EPA to regulate energy use or to regulate “outside the fence” of a source's emissions.
  - The NSPS rule does not face the same interpretive difficulty posed by the clear numerical thresholds at issue when considering the Tailoring Rule.

# The EPA Clean Power Plan

## ■ Basic points

- Rate-Based CO<sub>2</sub> Emission Performance Goals (lbs/net MWh).
- Implementation through State Plans.
- Varying state targets for emission reduction, based on four “building blocks.”
- Projected annual CO<sub>2</sub> reduction of 26% to 30% below 2005 levels.

## ■ Statutory authority

- Section 111(b) directs EPA to “list” categories of stationary sources that significantly contribute to air pollution, and to establish emission standards emitted by new sources in the listed categories.
- Power plants were listed in 1971.
- Section 111(d) directs the development of emission standards for pollutants emitted by existing sources in the listed categories.
- The emission standard must reflect emission reductions achievable through the “best system of emission reduction” (BSER).

# State Obligations

- EPA has calculated Rate-Based CO<sub>2</sub> Emission Performance Goals for each state, including an interim goal, which would apply between 2020-2029, and a final goal, to be achieved by 2030.
- The goals are based on EPA's estimates of each state's ability to reduce emissions through the use of BSER, including such factors as the availability of opportunities for renewable energy generation.
- For this reason, the goals vary widely. Arizona and South Carolina have targets equivalent to more than a 50% reduction from 2012-2030, while North Dakota and Rhode Island have targets of less than 15% in the same period.
- The final rates, assuming the goals are achieved, will also vary widely, from over 1,700 lbs/MWh in Kentucky and Montana to less than 400 lbs/MWh in Maine and Washington.

- Though BSER is based on the four building blocks, states may pursue any combination of the blocks that will achieve the reduction goal, as well as measures not part of the BSER determination, such as market-based trading programs.
- States will submit emission reduction plans to EPA for approval; EPA will evaluate the plans based on four criteria:
  - The presence of enforceable measures to reduce CO<sub>2</sub> emissions.
  - Projected achievement of emission reduction goals within the timeline.
  - Quantifiable and verifiable reductions.
  - A process for biennial reporting and corrective action.



- State Plans may take the “Portfolio Approach,” which would include emission limits for affected Electricity Generating Units (EGUs) along with other enforceable measures, such as demand-side efficiency measures, that will reduce CO<sub>2</sub> emissions from affected EGUs.
- Portfolio approach plans would include measures “enforceable against other entities” besides the affected EGUs.
- States may work with other states to develop multi-state plans and submit a single plan on behalf of all participating states. EPA suggests this will allow plans to take account of the regional nature of electricity generation and distribution.

## Existing State Programs

- Measures in existing state programs may qualify for use in demonstrating that a state plan will achieve the required level of emission performance.
- “Existing” measures must be “on the books” - legal requirements that include current and future obligations or current programs and measures that are in place and are anticipated to be continued or expanded.
- EPA proposes that measures a state takes after the date of the proposal, or programs already in place, which result in reductions during the 2020-2030 period, would apply toward achievement of the final goal. EPA asserts that this will leave states with currently existing programs better positioned to achieve the goals, but does not seem to credit reductions achieved in recent years.
- EPA has solicited comment on recognizing emissions reductions achieved by existing state programs starting from an earlier date.

# BSER – Building Block 1 – Measures to Reduce EGU Emission Rates

- Heat rate improvements - efficiency with which EGUs convert fuel heat input to electricity output.
  - EPA estimates that heat rate best practices will result in reductions of 1.3 to 6.7 percent, with additional reductions of around 4 percent achievable with equipment upgrades.
  - EPA estimates that heat rate improvements will partially pay for themselves through fuel savings, and expects reductions of 4-6% overall at a cost of between \$6 and \$12/ton.
- Carbon capture and sequestration technology (CCS).
  - EPA notes that implementation of CCS is more reasonable for new units than for existing ones, and thus did not propose to finalize CCS as a component of BSER for existing EGUs.

# BSER – Building Block 1 – Measures to Reduce EGU Emission Rates *(cont)*

- Substitution of lower-carbon fuels such as natural gas for higher carbon fuels such as coal.
  - EPA expects that the most significant cost associated with conversion to natural gas (or co-firing coal and gas) will be the incremental price of gas relative to coal. Given this cost, EPA suggests that achieving reductions in this way would be relatively expensive and other options are likely to be cheaper.

- Shifting generation among affected EGUs, from less efficient ones to more efficient ones.
- EPA suggests increasing use of existing natural gas combined cycle (NGCC) capacity; because NGCC units can produce more electricity from a given quantity of natural gas than can a steam EGU, re-dispatch to NGCC units is a cheaper way of reducing emissions than conversion of steam EGUs from coal to gas.
- In 2012, the average utilization rate of NGCC capacity was 46%; EPA targets at least 70% utilization.
- EPA expects a cost of reduction of around \$30/ton.

- EPA has developed renewable targets for each state, based on an assessment of feasibility and cost of installing new capacity.
- While EPA targets around 20% of generation from renewables by 2030, the individual state targets vary considerably, from around 2% in Kentucky to 25% in Maine.
- EPA notes that few nuclear plants have been built in recent years, and proposes delaying retirement of around 6% of nuclear energy capacity that is at risk of retirement.
- EPA expects a cost of reduction of between \$10 to \$40/ton.

# BSER – Building Block 4 – Demand Side Efficiency

- EPA has developed a “best practices” demand-side energy scenario based on levels of performance achieved or required by policies in leading states.
- Twelve leading states have achieved – or have requirements that will lead them achieve – annual incremental savings of around 1.5%, which EPA considers to be a reasonable target.

# BSER – Building Block 4 – Demand Side Efficiency *(cont)*

- EPA has not assumed any particular mix of policies, but notes the success of building energy codes, appliance standards, and tax credits in state initiatives.
- Because energy savings are cumulative, states with a 1.5% incremental savings rate can be expected to save 1.5% after the first year, 3% after the second year, and so on, dropping off after around ten years. This has led EPA to establish cumulative efficiency savings targets of between 9.3% and 12.1%, depending on how quickly the state is expected to achieve the 1.5% incremental rate.
- EPA expects a cost of reduction of \$16 to \$24/ton.



## Present Court Challenges

- On June 18, 2014, Murray Energy Corporation petitioned the D.C. Circuit Court of Appeals to prohibit adoption of the Clean Power Plan.
- As to whether the action is properly before the Court, Murray asserts that, while generally courts may only review final actions by federal agencies, the court may prohibit agencies from taking actions before they are finalized in extraordinary circumstances. Murray contends that the substantial burden in preparing to comply with the regulation constitutes such a circumstance.
- Murray's substantive argument is that Section 111(d) cannot be used to regulate emissions from sources that are regulated under Section 112. Section 112 regulates certain hazardous air pollutants and is applicable to many power plants.
- Complaint available [here](#).

## Present Court Challenges *(cont)*

- On August 1, 2014, West Virginia, Alabama, Indiana, Kansas, Kentucky, Louisiana, Nebraska, Ohio, Oklahoma, South Dakota, and Wyoming also petitioned the D.C. Circuit to stop the EPA from regulating.
- The states make a different argument about why their action is properly before the court. They ask the court to hold unlawful an earlier settlement agreement pursuant to which EPA commits to regulate coal-fired power plants under Section 111(d) and enjoin EPA from complying with that settlement. They argue that the settlement agreement is a reviewable action.
- The states make a substantive argument similar to Murray; they assert that under *Am. Elec. Power, Inc. v. Connecticut*, 131 S. Ct. 2527 (2011), EPA may not regulate sources under Section 111(d) that are regulated under Section 112.
- Complaint available [here](#).

# Potential Future Challenges

- Owners of affected EGUs may face standing issues, because the rule contains more, not fewer, options for reducing GHG emissions.
- States could challenge reduction targets as arbitrary and capricious; while the targets are based on EPA expectations of what each state can reasonably accomplish, they vary widely. For example, Massachusetts must cut from 925 lbs/MWh to 576 lbs/MWh, a 38% reduction, while Montana must cut from 2,245 lbs/MWh to 1,771 lbs/MWh, a 21% reduction, leaving Montana with an emissions rate three times that of Massachusetts.

## Potential Future Challenges *(cont)*

- “Other entities” regulated under state plans could argue that Section 111(d) applies only to “stationary sources,” and should not be used to require state plans that regulate non-EGUs.
- Section 111(d) is not frequently used, and courts have had little opportunity to interpret EPA’s authority.

- June 18, 2014 – Notice of proposed rulemaking.
- October 16, 2014 – Closure of comment period.
- June 2015 – Final rulemaking.
- April 1, 2016 – Deadline for Letter of Intent to participate in phased plan submission, under which a state submits an initial plan and then a final plan.
- June 30, 2016 – Deadline for submission of non-phased state plans or, in the alternative, initial plans that include commitments to ensure that the state will submit a final plan by June 30, 2017 (if a single state) or June 30, 2018 (if part of a multi-state plan).

# Comments

- The deadline for comments is October 16, 2014.
- EPA has solicited comments on dozens of specific questions, a full list of which is available [here](#).
- The Proposed Rule is available [here](#).

## Modified and Reconstructed Sources

- EPA proposes emission limits under 111(b) from modified and reconstructed stationary sources.
- A “modification” is a physical or operational change at an existing source that increases the source’s maximum achievable hourly rate of emissions.
- A “reconstruction” is the replacement of components of an existing facility to an extent that the fixed capital cost of the new components exceeds 50% of the fixed capital cost that would be required to construct a comparable new facility.
- The proposal sets numerical emission limits for CO<sub>2</sub> based on BSER.
- The Proposed Rule is available [here](#).

# Determining BSER for Modified and Reconstructed Sources

- For modified fossil fuel-fired utility boilers and IGCC units - each unit's own best potential performance based on a combination of best practices and upgrades. This may be satisfied by meeting one of two alternate standards:
  - 2% less than the affected source's best demonstrated historical performance between 2002 and the modification OR
  - A unit-specific numeric emission standard dependent on the timing of the modification relative to the adoption of a section 111(d) plan that covers the source.
- For modified natural gas-fired stationary combustion turbines – based on NGCC technology.
- For reconstructed fossil fuel-fired utility boilers and IGCC units – the most efficient generating technology for these types of units.
- For reconstructed natural gas-fired stationary combustion turbines – based on NGCC technology.